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The geographic range of *Tragosoma depsarium* (Linnaeus, 1767) (Coleoptera, Cerambycidae) in the Palaearctic

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Abstract

The geographic range of the rare coleopteran *Tragosoma depsarium* (Linnaeus, 1767) is summarized, and the Eurasian distribution is mapped for the first time. Particular attention is paid to the eastern Palaearctic part of the species' range, where dubious data prevail. Distributional data from the Russian Far East have been published, but not confirmed, are considered, and new records of this species in Eastern Siberia are reported.

Keywords

Distribution, Europe, rare species, Russian Far East, Siberia

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Introduction

Tragosoma depsarium (Linnaeus, 1767) is the sole species of the genus *Tragosoma* Audinet-Serville, 1832 and the tribe Meroscelisini J. Thomson, 1861 in the Palaearctic (Drumont and Komiya 2010). Previously, this species was considered Holarctic; however, modern data show that it does not occur outside the Palaearctic (Laplante 2017).

Throughout its entire range, *T. depsarium* is rarely and sporadically found. This species is ecologically vulnerable. Rapid reduction of forests with optimal habitats is the main limiting factor for this species' distribution. *Tragosoma depsarium* prefers coniferous forests where the proportion of mature trees is more than 25%, lighting conditions are good and stand density is low, and there is considerable dry, windfallen pines or spruces having a large diameter and no bark. Soil under these trees should have an optimal moisture content, which is important for symbiotic fungi (Wikars 2003, 2004). The current forest management regulations, including extinguishing forest fires, sanitary felling of old trees and clearing of windfallen trees, as well as replacing mature forests cut for industrial purposes with man-made, high-density stands, do not ensure good environmental conditions for this rare species. Even within protected areas, where stand density becomes too high without felling and fires, populations of this species can be threatened. The gaps between the isolated populations also impair the chances of this species' long-term survival.

Tragosoma depsarium is protected in Europe (Nieto and Alexander 2010) and many regions of Russia (Jakovlev 2007; Tikhomirov 2007; Nikitsky 2008; Egorov 2010; Dedyukhin 2012; Sitnikov 2013; Potanin 2014; Yuferev

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2014; Vlasov 2015; Gus'kova 2016; Gorbunov 2018; Shapovalov 2018; Dolgin and Kolesnikova 2019). However, more accurate data on this species' distribution are needed to ensure efficient protective measures. It is not always possible to be sure that *T. depsarium* still occurs in sites where it was found over 100 years ago, and its presence has not been confirmed later. The fact that vast forests are now growing in places where old forests used to grow does not guarantee that *T. depsarium* population can be where they once were. Because of the strict ecological requirements of *T. depsarium* and the possible changes in local conditions, this species could have disappeared in these parts of the range. Meanwhile, records have recently been made for the first time in some territories. The data on the distribution of *T. depsarium* in the Asian part of Russia are insufficient. In this study, we attempt to summarize the scattered data on the distribution of *T. depsarium* from all available sources. We also present new distributional data from the eastern part of the species' range.

Methods

We used an extensive list of available literary sources, web resources, and personal reports from observers and collectors to summarize the geographic range of *Tragosoma depsarium*. The entomological collections of the Zoological Institute of the Russian Academy of Sciences (Saint Petersburg), Federal Scientific Center for Terrestrial Biodiversity of East Asia FEB RAS (Vladivostok) and the Institute of Systematics and Ecology of Animals SB RAS (Novosibirsk) were studied. Furthermore, we publish for the first time data on the easternmost record of *T. depsarium*, which we confirmed by the study of the actual material.

The image of the specimens from Zabaykalsky Krai was taken using a Canon EOS 5d Mark II camera with a Volna-9 50 mm f/2.8 macro lens. The maps were prepared using the CorelDRAW Graphics Suite X7 software.

The following symbols were used in the text and on the map: in the text – Tomsk Oblast (TOM): Pervomaysky District (3); on the map – TOM3. No figure denotes that no other records were made within this territory: ZAB – Zabaykalsky Krai. The material provided by the Institute of Systematics and Ecology of Animals is referred to as ISEA in the text; Zoological Institute of the Russian Academy of Sciences – ZIN. Data on the age of the records are graphically shown on the maps.

Results

***Tragosoma depsarium* (Linnaeus, 1767)**

New record. RUSSIA – **Zabaykalsky Krai** • Shilkinsky District, 7 km S of Kyeken village, Ukshakhan creek; 52°00′00″N, 115°25′08″E; 602 m elev.; 30.VI.2017; V.A. Golovizin leg.; small-leaved forest; 1♀, 1♂, V.G. Bezborodov's personal collection (Fig. 1).

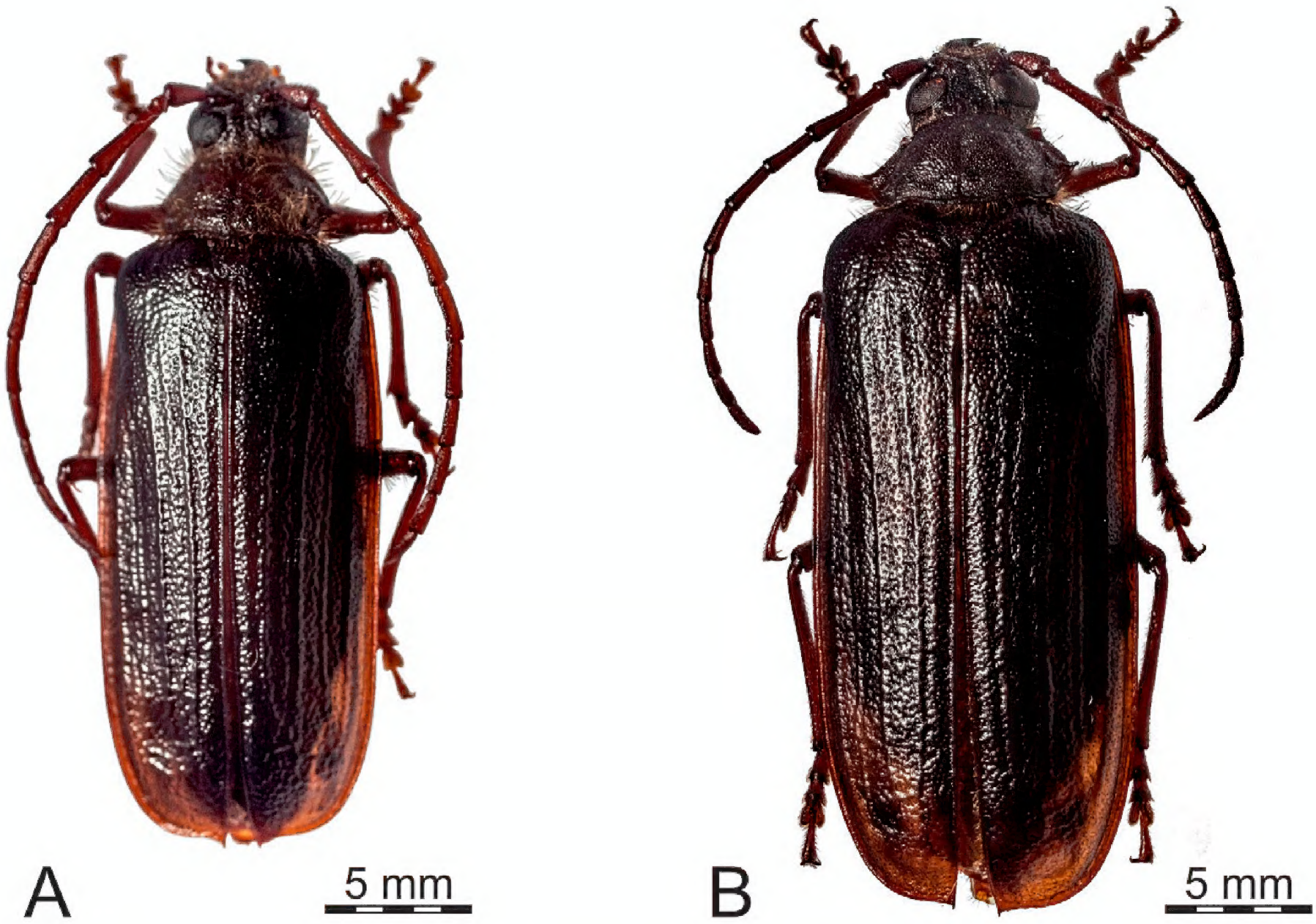

Figure 1. *Tragosoma depsarium* (dorsal view) from Zabaykalsky Krai, Russia. **A.** Male. **B.** Female.

Additional material examined. UKRAINE – **Rivne Oblast** • Rivne, 1898; 1 specimen, ZIN. RUSSIA – **Arkhangelsk Oblast** • Velsk; D.V. Pomerantsev leg.; 1 specimen, ZIN. **Chelyabinsk Oblast** • Zlatoust, 4.VIII.1898; Kalachev leg.; 1 specimen, ZIN. **Tomsk Oblast** • Pervomaysky District, Frantsevo village, 6.VII.1959; Grigoriev leg.; 1 specimen, ISEA • mouth of the Chichkayul River, 18.VI-8.VII.1959; 2 specimens, ISEA. **Novosibirsk Oblast** • Novosibirsk ("Novonikolayevsk"), 22.VI.1910; Kopylov leg.; 1 specimen, ZIN • Bolshaya Elovka River, 1.VIII.1912; A. Mylenikoff leg.; 3 specimens, ZIN. **Kemerovo Oblast** • Novokuznetsky District, Kalinovsky village, VII.1979; 1 specimen, ISEA • Tashtagolsky District, Sheregesh settlement, 9.VII.1965; A. Kononenko leg.; 2 specimens, ISEA. **Altai Krai** • Troitsky District, vicinity of Borovlyanka village, 3.VII.1953; 1 specimen, ISEA. **Altai Republic** • Ulagansky District, S of Lake Teletskoye, 10.VII.1969; 3 specimens, ISEA • Choysky District, 20 km S of Paspaul village, 20.VII.1999; V.K. Zinchenko leg.; 1 specimen, ISEA • Shebalinsky District, Cherginsky Ridge, the Kukuya River, early July 1981; V.V. Dubatolov leg.; 1 specimen, ISEA • Chemalsky District, Uznezya village, 29.VI.1909; Gorchakovsky leg.; 1 specimen, ZIN. **Republic of Khakassia** • Askizsky District, Birikchul village, 25.VII.1969; 1 specimen, ISEA. **Krasnoyarsk Krai** • vicinity of Krasnoyarsk, VIII.1901; 1 specimen, ZIN.

Identification. *Tragosoma depsarium*, the only of the genus *Tragosoma* and tribe Meroscelisini in the Palaearctic fauna, morphologically differs very much from other species of this subfamily found in Eurasia, which makes it is easily identifiable. The imago has elongated elytra and a small pronotum and is brownish-rusty in color. The head is small, with a groove between eyes. The antennae have the apices reaching the middle of the elytra in males, or not reaching this level in females. The pronotum bears dense, rusty hairs. The body is brownish-rusty and ventrally has long, golden hairs.

Discussion

The range of *Tragosoma depsarium* can be conditionally subdivided into two parts: the European one, which includes the European countries and Russia stretching as far as the Ural Mountains, and the Asian one, including only Siberia, where the easternmost limits of the species' range are insufficiently known. We summarize the distributional data of *T. depsarium* and the conservation status of the species in various territories, as well as present maps showing the locations and the age of the records.

The European part of the range, European countries (Fig. 2). **Norway (NR)**: Aust-Agder (1), Telemark (2), Vestfold (3), Buskerud (4), Hedmark (5) (Blindheim 2020; Ødegaard and Vang 2020). Conservation status: Vulnerable (Ødegaard et al. 2015). **Sweden (SV)**: Lappland (1), Norrbotten (2), Västerbotten (3), Ångermanland (4), Jämtland (5), Medelpad (6), Härjedalen (7), Hälsingland (8), Gästrikland (9), Dalarna (10), Värmland (11), Västmanland (12), Närke (13), Uppland (14), Södermanland (15), Dalsland (16), Östergötland (17), Småland (18), and Gotska Sandön National Park (19) (Wikars 2003; GBIF 2020); previously in Västergötland (Thomson 1866). Conservation status: Vulnerable in 2010 (Ljungberg et. al. 2010) but changed to Near Threatened in 2015 (Ljungberg 2015). **Finland (FI)**: North Karelia (1) since 1975; earlier in Pohjois-Savo (2), Pirkanmaa (3), Keski-Suomi (4), Kanta-Häme (5), Varsinais-Suomi (6) (Saalas 1923; Karjalainen et al. 2010); Etelä-Pohjanmaa (South Ostrobothnia) (Saalas 1923). Conservation status: Endangered (Malmberg et al. 2019). **Spain (SP)**: Huesca (1), Lleida (2) (González et al. 2007). **Andorra (AN)**: Botella Pass in 1975 (Vives 1984). **France (FR)**: Upper Pyrenees (1), Upper Garonne (2), Eastern Pyrenees (3), Upper Savoy (4), Savoy (5), Maritime Alps (6) (Brin et al. 2006; Brustel et al. 2001; Blanc 2011; Turpaud 2018; Plaige 2019; Duhem and Horellou 2020; Lapenu 2020; Touroult 2020). **Belgium (BE)**: old records near Brussels (1) and Chaudfontaine (2) (Verschelde and Brosens 2019a, 2019b). **Germany (GE)**: mountain forests of Upper Bavaria (1) (Müller-Kroehling et al. 2009; European Nucleotide Archive 2019); eastern Thuringia (2) in 2005, where it had probably been introduced (Flossmann 2006); included in the lists of threatened species of Germany and Bavaria: Endangered (Binot et al. 1998; Schmidl and Bussler 2003). **Switzerland (SZ)**: Vaud (1), Fribourg (2), Valais (3), Ticino (4) (Chittaro et al. 2020). Conservation status: Endangered (Monnerat et al. 2016). **Austria (AU)**: Vorarlberg in 2016 (1) (Eckelt and Degasperi 2018); North Tyrol (2), Salzburg (3), Styria (4), Upper Austria (5), Lower Austria (6), Carinthia (7) (Demelt 1957; Lovcik 1970; Mitter 1988; Schillhammer 1995; Adlbauer 2001, 2010; Hellrigl 2010; Kust 2016; Aurenhammer et al. 2019). Conservation status: possibly Endangered (Jäch 1994). **Liechtenstein (LS)**: repeated records in this country (Adlbauer 1992; Brandstetter and Kapp 1998; Drumont and Komiya 2010; Mannerkoski et al. 2010). **Italy (IT)**: 19th century records at Great St. Bernard Pass, Piedmont (1) (Ghiliani 1887), Val Cadino, province of Trento (2) (Bertolini 1895); South Tyrol (3) (Bertolini 1895; Hellrigl 1967); Val Genova, province of Trento (Moscardini 1956), have not been subsequently confirmed (Martinelli 1996). Conservation status: Critically Endangered (Rapuzzi et al. 2014). **Poland (PL)**: last found in Białowieża Forest (Belovezhskaya Pushcha) (1) in 1921; before that, found in the Warmian-Masurian (2), Kuyavian-Pomeranian (3) and Lower Silesian (4) provinces (Gutowski 2004). Conservation status: Critically Endangered (Pawłowski et al. 2002). **Czech Republic (CZ)**: South Bohemia (1), Moravian–Silesian Beskids (2). Until 1949, in the Central Bohemian Region (3) (Sláma 1998; Krása 2015). Conservation status: Critically Endangered (Kabátek and Skořepa 2017). **Slovakia (SK)**: Žilina (1), Prešov (2) and Banska Bystrica (3) regions (Sláma 1998). Conservation status: Vulnerable (Holecová and Franc 2001). **Hungary (HU)**: a single

Figure 2. Distribution records of *Tragosoma depsarium* (Linnaeus, 1767) in Europe.

specimen in the Zemplén Mountains in north-eastern Hungary in 1986 (Medvegy 2001). **Slovenia (SL)**: one specimen in the Julian Alps in northern Gorizia Region (1) in 1952; additional 19th century records in Carniola (2) (Brelih et al. 2006). **Croatia (CR)**: Velika Kapela (1) and Velebit mountain ranges in the western Croatia; Virovitica-Podravina County (2) (Mikšić and Georgijević 1971); Nikola Rahme (pers. comm.) reported that he found larvae and adults in the Northern Velebit National Park (3) in 2007. **Serbia (SB)**: Kopaonik Mountains in 1911 (1) (Ilić and Ćurčić 2015; Mesaroš 2020); according to Filip Vukajlović and Dragan Pavićević (pers. comms.), in Kosovo (UTM DN31) on 23 August 1918, in the Prokletije Mountains (2). In the summer of 1918, this region of Kosovo constituted a part of the Kingdom of Montenegro, so in the literature (Mikšić 1963; Mikšić and Georgijević 1971) reportedly made in Montenegro. **Bosnia and Herzegovina (BH)**: Federation of Bosnia and

Herzegovina: Glamoč (1), Livno (2), Sarajevo (3), Mount Igman (4); Republika Srpska: Bijelo Brdo (5) (Apfelbeck 1894; Mikšić 1963). **Albania (AL)**: Shkodër (1) and Dibër (2) (Foit 2007; Rapuzzi and Sama 2012). **Greece (GR)**: Katara Pass in the Pindus Mountains (1), Mount Olympus (2) (Berger et al. 2010). **Bulgaria (BU)**: Pazardzhik (1), Blagoevgrad (2) and Smolyan (3) provinces (Migliaccio et al. 2007). Conservation status: Vulnerable (Guéorguiev 2015). **Romania (RO)**: Transylvania, Harghita Mountains (Patkó 2008). **Estonia (EN)**: extirpated (Süda 2008). More than a century ago, it was found near Tartu (1) and north of Lake Peipsi, now within modern Ida-Viru County (2) (Voolma and Süda 1999). **Latvia (LA)**: extirpated (Spuris 1998), but in 1999–2002, fragments of adults in Valka (1), Alūksne (2), and Ventspils (3) municipalities (Telnov and Kalniņš 2003); Slitere National Park and its surroundings (4) in 2008–2019 (Vilks and Pilāts 2008; Dabasdati.lv 2020); Gulbene Municipality (5) (Telnov et al. 2011). **Lithuania (LT)**: vicinity of Vilnius (1) in the 1920s (Zawadzki 1937); Chepkeliai Nature Reserve (2) in 1978 (Pileckis and Monsevičius 1997). **Belarus (BY)**: Vitebsk (1), Mogilev (2), Brest (3) regions; Belovezhskaya Pushcha National Park (4) (Arnold 1902; Radkevich 1936; Zagaykevich 1986; Tsinkevich 2015). Conservation status: Endangered. **Ukraine (UA)**: Eastern Beskids (1) (Nowicki 1864; Zamoroka 2018); Olevsk (2) (Plavilstshikov 1936); very old records in the vicinity of Kyiv (3) (Cherkunov 1889) and Rivne (4) (additional material, ZIN).

The European part of the range, Russia (Fig. 3). **Republic of Karelia (KR)**: Suoyarvsky (1), Kondopozhsky (2), Olonetsky (3), Pudozhsky (4) and Pitkyarantsky (5) districts, Kostomukshsky Urban Okrug (6) (Saalas 1923; Siitonen et al. 1996; Jakovlev et al. 2003; Humala and Polevoi 2009). Conservation status: Endangered (Jakovlev 2007). **Arkhangelsk Oblast (ARK)**: vicinity of Velsk before 1905 (additional material, ZIN). **Leningrad Oblast (LEN)**: Vyborgsky (1), Priozersky (2), Lodeynopolsky (3) Luzhsky (4) districts (Saalas 1923; Krivokhatsky 2002; Shapovalov 2018); old records from the former Terijoki, now within St. Petersburg (5) (Saalas 1923). Conservation status: category 4 – undefined status (Shapovalov 2018). Previous conservation status: Vulnerable (Krivokhatsky 2002). **Pskov Oblast (PSK)**: vicinity of Pskov in 1900 (Chistovsky 1929). **Bryansk Oblast (BRY)**: Bryansk forest at the beginning of the 20th century (Stark 1926). **Kaluga Oblast (KLU)**: probably extirpated (Alekseev and Perov 2017); Lyudinovo forest at the beginning of the 20th century (Chernyshov 1930). **Moscow Oblast (MOS)**: Solnechnogorsky, Istrinsky and Odintsovsky districts (1) over 50 years ago; Orekhovo-Zuyevsky District (2) in 2006 (Danilevsky 2005; Nikitsky 2008; Nikitsky 2009). Conservation status: rare species declining in number. **Yaroslavl Oblast (YAR)**: Rybinsky, Uglichsky (1), Pereslavsky (2) districts (Vlasov 2019); vicinity of Yaroslavl (3) in the 19th century (Vlasov 2015). Conservation status: Endangered (Vlasov 2015). **Ivanovo Oblast (IVA)**: Kineshemsky (1), Pestyakovsky, and Yuzhsky (2) districts (Svetlov 1996; Danilevsky 2014). Conservation status: rare species (Tikhomirov 2007). **Nizhny Novgorod Oblast (NIZ)**: Volodarsky District (1), Semyonovsky Urban Okrug (2) (Mokrousov 2008). Conservation status: species with

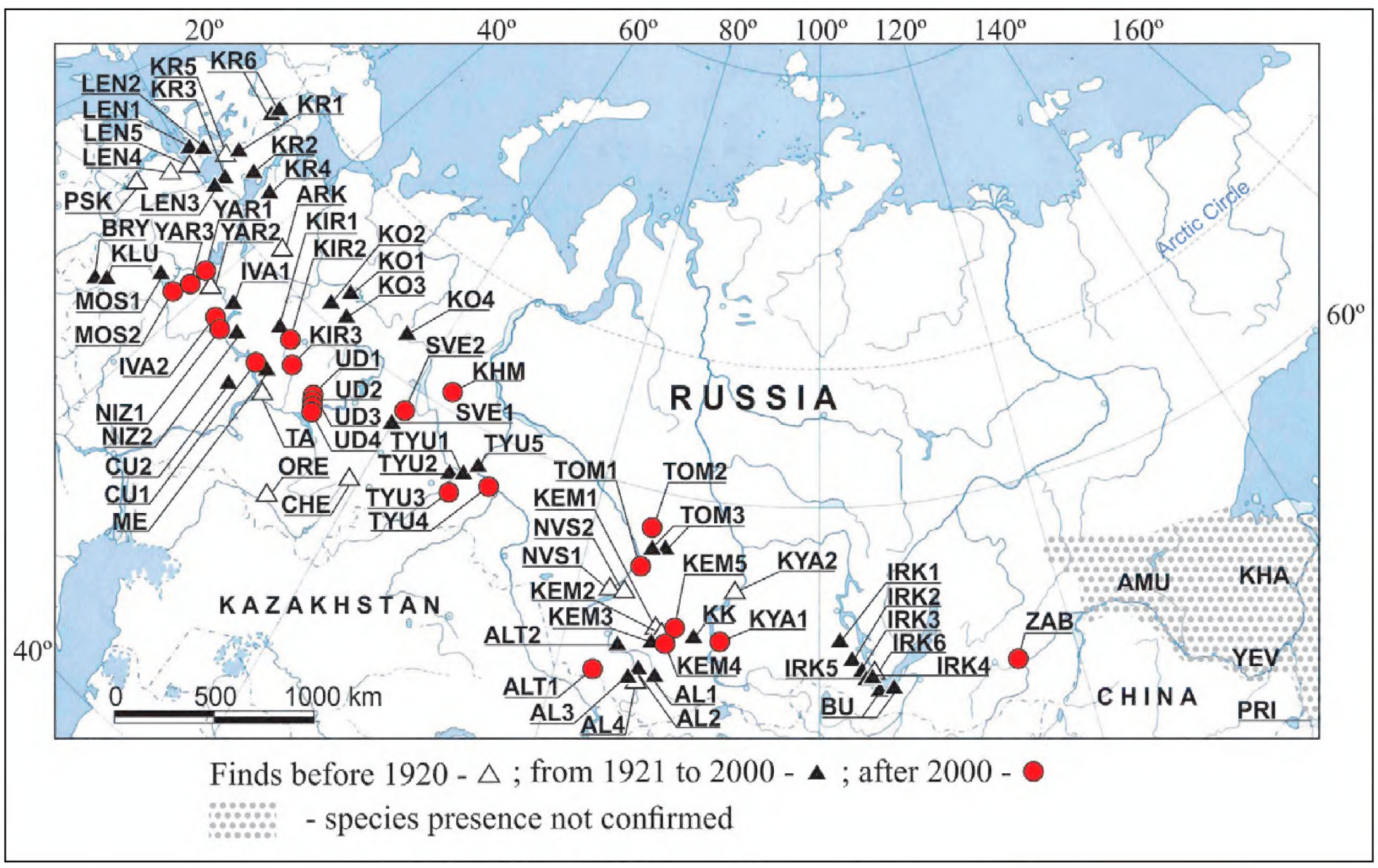

Figure 3. Distribution records of *Tragosoma depsarium* (Linnaeus, 1767) in Russia.

low abundance (population density) being the biological norm (Potanin 2014). **Kirov Oblast (KIR)**: Shabalinsky, Svechinsky (1), Kotelnichsky (2), and Nolinsky (3) districts. Conservation status: rare species declining in number (Yuferev 2014). **Mari El Republic (ME)**: one specimen in the Zvenigovsky District in 1989 (Ivshin 1990). **Chuvash Republic (CU)**: Zavolzhye (near Cheboksary) (1); Alatyrsky and Shemurshinsky (2) districts (Egorov 2009, 2018). Conservation status: Rare species not threatened with extinction (Egorov 2010). **Komi Republic (KO)**: vicinity of Syktyvkar, Syktyvdinsky (1); Sysolsky (2), Kortkerossky districts (3); upper reaches of the Pechora River (4) (Sedykh 1974; Medvedev 1997; Yurkina 2011; Dolgin and Kolesnikova 2019). Conservation status: rare species with naturally low abundance (Dolgin and Kolesnikova 2019). **Udmurt Republic (UD)**: Yakshur-Bodyinsky (1), Zavyalovsky (2), Sarapulsky (3), Kambarsky (4) districts (Dedyukhin 2005, 2006, 2007; Adakhovsky and Dedyukhin 2011; Baranova et al. 2011). Conservation status: rare species (Dedyukhin 2012). **Republic of Tatarstan (TA)**: near Kazan in 1894 (Lebedev 1906). **Orenburg Oblast (ORE)**: vicinity of Orenburg in 1896 (Semenov-Tian-Shansky 1927).

The Asian part of the range, Russia (Fig. 3). **Sverdlovsk Oblast (SVE)**: Verkhnesaldinsky (1) and Novolyalinsky (2) districts. Conservation status: rare species (Gorbunov 2018). **Chelyabinsk Oblast (CHE)**: vicinity of Zlatoust in 1898 (additional material, ZIN). **Tyumen Oblast (TYU)**: Yarkovsky (1), Nizhnetavdinsky (2), Yalutorovsky (3), and Vagaysky (4) districts; vicinity of Tobolsk (5) (Kolosov 1933; Sitnikov 2000, 2004, 2013; Stolbov et al. 2019). Conservation status: rare species. **Khanty-Mansi Autonomous Okrug (KHM)**: Sovetsky District and Kondinskie Lakes Natural Park in 2006 (Ukhova 2009; Gashev et al. 2012). **Tomsk Oblast (TOM)**: Tomsky (1) and Verkhneketsky districts (2) (Kraatz 1879; Kiseleva 1926; Kuleshov and Romanenko 2009; Krivets and Vysotina 2011); Pervomaysky District (3) (additional material, ISEA). **Novosibirsk Oblast (NVS)**: Novosibirsk (1) (former Novonikolayevsk) in 1910; Bolshaya Elovka River (2) in 1912 (additional material, ZIN). **Kemerovo Oblast (KEM)**: Salair (1) and Novokuznetsk (2) (Gebler 1848); later found in Novokuznetsky District (3) (additional material, ISEA); 4 km north of the Sheregesh urban-type settlement Tashtagolsky District (4) (Efimov 2001, pers. comm.) where unpublished records were previously made (additional material, ISEA); Mezhdurechensky District (5) (Kazakova 2018). **Altai Krai (ALT)**: Tigirekskiy Nature Reserve (1) in 2014 (Gus'kova and Kuftina 2015); Troitsky District (2) (additional material, ISEA). Conservation status: very rare species (Gus'kova 2016). **Altai Republic (AL)**: near Lake Teletskoye (1) in 1901 (Semenov-Tian-Shansky 1927) and in 1969 (additional material, ISEA); Choysky (2) (additional material, ISEA), Shebalinsky (3) (additional material, ISEA), and Chemalsky (4) districts (additional material, ZIN); reported as common (Cherepanov 1979). **Republic of Khakassia (KK)**: Askizsky District (additional material, ISEA). **Krasnoyarsk Krai (KYA)**: Minusinsky District in the vicinity of Znamenka village (1) in 2009 (Listvyagova 2013); old record in the vicinity of Krasnoyarsk (2) (additional material, ZIN). **Irkutsk Oblast (IRK)**: Ziminsky (1), Tayshetsky (2), Usolsky (3), Shelekhovsky (4), Slyudyansky (5), and Irkutsky (6) districts (Kraatz 1879; Agafonova and Antonov 2014). **Republic of Buryatia (BU)**: south of Lake Baikal in the Kabansky District in 1963 (Agafonova and Antonov 2014) and in 1973 (Švácha and Danilevsky 1986). **Zabaykalsky Krai (ZAB)**: Shilkinsky District (new record). **South of the Russian Far East: Amur Oblast (AMU), Jewish Autonomous Oblast (YEV), Khabarovsk Krai (KHA), and Primorsky Krai (PRI)**: reported to occur in this territory (Samoylov 1936; Shabliovsky 1956; Bílý and Mehl 1989) but not confirmed.

Tragosoma depsarium, a boreomontane species, is predominantly found in the foothill and mountain subboreal and boreal forests of Eurasia and it sporadically distributed throughout its range.

In Europe, *T. depsarium* has been studied since its first description by Linné (1767). The Swedish population of *T. depsarium* is currently quite large and stable (Jeppsson et al. 2010). *Tragosoma depsarium* is also found relatively regularly found in the Alps, Pyrenees, Carpathians, and mountains of the Balkan Peninsula. Outside of these mountainous regions and Scandinavia, the largest number of new records was made in central and eastern European Russia. In of its European range, the most recent records were made over 20 years ago, and sometimes even more than 100 years ago. Today, *T. depsarium* definitely does not occur in Belgium, and its presence in Poland, Italy, Ukraine, and Estonia needs to be confirmed. The status of *T. depsarium* populations within Russia, in the Pskov, Bryansk, Kaluga, and Orenburg Oblasts and the Republic of Tatarstan is currently unknown; all published records from these territories were made a very long time ago. The presence of the species in the Caucasus (Bílý and Mehl 1989) is unconfirmed (Danilevsky 2014).

Much less is known about the distribution of *T. depsarium* in Siberia, as entomological studies here were started later and then on a smaller scale and in less detail than in Europe. The vastness of Siberia and the poor development of transport infrastructure is the cause. Most of the records are known from in the western part of the West Siberian Plain: Sverdlovsk, Tyumen, Tomsk and Kemerovo Oblasts and in Altai. We have found no published records of *T. depsarium* made in the lowlands of the central West Siberian Plain. It is unclear whether this is due to habitat discontinuity or insufficient investigations.

Many records of *T. depsarium* have been made near Lake Baikal, especially in the Irkutsk Oblast. The records of larvae south of Lake Baikal have for a long time been considered the easternmost ones (Danilevsky

2014). Many researchers reported that this species occurs east of Lake Baikal to the Pacific Ocean, along the Amur or the northern borders of China (Hamilton 1892; Saalas 1923; Plavilstshikov 1936; Samoylov 1936; Gressitt 1951; Bílý and Mehl 1989). Shabliovsky (1956) included the Khabarovsk Krai and Primorsky Krai in the range of *T. depsarium* and mentioned that the species develops on *Picea jezoensis* (Siebold & Zucc.) Carr., *Picea obovata* Ledeb., and *Pinus koraiensis* Siebold & Zucc. and provided detailed descriptions of the shape of larval galleries. However, none of these authors have reported records based on confirmed material from the Russian Far East. We failed to find specimens of *T. depsarium* in the entomological collection of the Federal Scientific Center of the East Asia Terrestrial Biodiversity FEB RAS. According to Danilevsky (2014), the occurrence of *T. depsarium* in the Russian Far East and in North China cannot be considered established. Today, the easternmost record of this species is that made in the Zabaykalsky Krai and presented in this study. Substantiation of the occurrence of *T. depsarium* in the Russian Far East requires additional research.

Hence, based on our study of reliable materials, *T. depsarium* has a western–central Palaearctic range, and with the greatest number of records in the west. This species' farther east in Siberia, near the Pacific Ocean, remains to be proved.

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Authors' Contributions

VGB identified the species. NSA and VGB studied the material from the collections. NSA searched the literature, photographed the specimens collected from Zabaykalsky Krai, and prepared the distribution map. All authors have read and approved the final version of the manuscript. The authors declare that they have no conflict of interest.

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